Mr. Steven Waldman

Senior Advisor

Federal Communications Commission

445 12th St. SW

Washington, DC 20554

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Dear Mr. Waldman,

Thank you again for the invitation to speak at the Federal Communication Commission's recent Future of Media Workshop.

You've asked for details about how my suggestion for a content-neutral Public Media Technology Transformation Fund might accelerate media innovation in America.

Below are some ideas I hope you will find helpful. I should note this is not an official paper from Knight Foundation. These are my own personal views, after three careers, as a journalist, a news historian and a media philanthropist. At the same time, my views obviously are informed by work our president, Alberto Ibargüen, and our team at Knight have done these past five years to try to advance media innovation.

Why a Public Media Technology Transformation Fund?

The Federal Communication Commission has embarked on what may well be the most significant reexamination of public media policy since the creation of public broadcasting.

The issue: How are we going to deal with this new digital age?

How can we help existing public broadcasters transform, to recapture significant past public investment in public media and secure its future? At the same time, how do we broaden the definition of public media to help the new startups, which, with lesser resources, are accomplishing amazing things?

At the heart of this is technology. Digital technology is causing the "creative disruption" that is remaking media ecosystems. The government has helped public broadcasters turn their external television and radio signals into digital signals. Now it needs to help them turn their internal news and information collection systems into modern digital systems.

New digital tools provide new ways to do journalism. Technological breakthroughs allow one well-trained journalist to do things that used to require dozens if not hundreds of old-school shoe-leather reporters. The digital convergence also is changing the way people consume news, making it inefficient to collect news and then distribute it only on radio, or only on TV.

A major content-neutral technology fund would maximize the adoption of these new tools in public broadcasting. For the first time, having only two reporters at a public radio station need not be an impossible editorial challenge. With breakthroughs in crowd-sourcing (Public Insight Journalism), data-mining (TracFed, Sunlight Foundation) and automated applications (Open Block), two reporters can act like many more than two. By distributing news not just on radio but on the web and through digital devices, these reporters can reach more people. They can provide journalism in the ways Pew research shows Americans prefer -- portable, personal, participatory news.

Despite statements to the contrary, public broadcasting is not adopting those tools rapidly enough. All in all, it is missing an opportunity to convert from public broadcasting to public media. It is missing its best chance in a generation to rapidly grow audience. Projects such as PBS Engage, NPR Argo, the joint public media platform, and web work by Frontline and NewsHour are notable -- but the money involved is a fraction of the operating costs of the organizations involved. Even the most innovative among them appears to devote no more than 10 percent of their budgets to technology transformation. (Perhaps, if the Corporation for Public Broadcasting turned into the Corporation for Public Media it might take a major role in changing this.)

The Knight Commission for the Information Needs of Communities in a Democracy recommends that we increase support for public media aimed at meeting community information needs. Why? Because the creative destruction of new information technology is causing the heart of American's news system – the daily newspaper – to cut back dramatically on local coverage. Thousands of the journalists we have depended upon for local education news or health news or government news have lost their jobs in the past few years. If public broadcasting could turn its "most trusted" brand toward local news and toward greater interactive connections with local communities, that would help communities across the nation.

Philanthropy has started new, nimble, web-based public media organizations that are rapidly gaining audience. We also are funding new, open source technology that helps nonprofits as well as businesses automate and improve journalistic functions. In a contest like the Knight News Challenge, however, over four years 10,000 have entered and only 100 have won. We are leaving a lot on the table. We believe we have proven the concept that a content-neutral technology fund can accelerate media innovation. But we seem to be working with the early adopters, not the middle of the bell curve, and certainly not, as a whole, public broadcasting. And most foundations are not doing what we are doing. A new report, from Grantmakers in Film and Electronic Media, called "Funding Media, Strengthening Democracy," notes once again that grantmakers must move faster and more seriously into technology in their media funding. A

larger pool of money is needed to "scale" the innovations that have in recent years proven themselves.

There are a lot of ways Washington can approach the creative destruction of this new digital age. One that resonates is a content-neutral technological fund to help both the existing public broadcasters and at the same time help the new startups, which -- who knows -- may either replace, or become partners with, or even eventually may be absorbed by traditional public broadcasters. A fund could help make technological innovations universally usable in public media system. It could help public broadcasters use digital technology to become more local and more interactive. And it will help during a time when money is scarce and public broadcasters are hard pressed to keep the lights on and innovate at the same time.

Government should create a Public Media Technology Transformation Fund for all the same reasons it promotes universal broadband. Without it, the nation will simply not be competitive in this century. People must have access to broadband, but also have reasons to use it, and being able to consume interesting, relevant public media in cyberspace is a great reason to care about it. This means adding digital capacity to public broadcasting newsrooms is not adding "bells and whistles." Rather, it is adding the hope that these entities will be viable in the near-term future of web radio in cars and web television in homes. New nonprofit news organizations have in just the past few years generated in aggregate millions of unique monthly visitors on their web sites without any of the legacy costs of transmission towers or the need for big national networks. They are demonstrating the efficiency of digital public media. If a tech fund systematically unleashes open source software applications and the technology needed to operate them, and grants money for code, coders and computers to news organizations across the country, it could spread public media innovation faster into new groups and deeper into existing ones, and create nothing less than a news renaissance in America.

Everyone can win here. A local newspaper, a commercial or public broadcaster, ethnic and alternative media, citizen media, new web-based startups, all of them can use open source news technology. The technology does not care whether they are liberal or conservative, old or young, city dwellers or rural Americans, black or white or any color of the rainbow. People will still be free to choose what news they would like to consume; they will, in fact, have greater choice in a media ecosystem richer in local media.

Seven Ways a Major Fund Could Make a Difference

For illustration purposes, I've set the fund at \$300 million a year: not because any particular number needs to be set in stone but to make the point that a major fund can accomplish major things. This would be one dollar per American per year, to preserve previous investment of billions in public broadcasting and to try to help public media's new leaders create a new future.

Here are seven ways a major fund could produce major results:

1. Technology Transformation and Tool Adoption in Existing Public Media Organizations

A general grant fund might give out half of the total amount set aside each year, say \$150 million a year. That money could be flexible, given out across silos. Any kind of organization listed

anywhere in this letter could apply. It could be one-time money for new machines, software and technology staff.

I would give traditional public broadcasters infrastructure grants when

- 1.) Their project (even an existing one) makes use of digital technology to create news and information that is more local, personal, portable and participatory.
- 2.) They are willing to co-support their futures by finding matching money within their own organization.

Examples: I like WHYY's idea to start a web-based local project called News Works using significant amounts of its own money. But I worry that WHYY's entire web operation is simply not nimble enough. Can it use all of the open source software being invented nationally as well as doing its own project? In Miami, we demonstrated proof of concept by helping WLRN's develop a community video platform, uVu. But what WLRN needs is a more significant amount of money to scale the platform, to provide cameras and training to all of the community groups who will feed the video into uVu and to set aside an increased web staff for a few years to make sure it takes root. I would support the WHYYs and WLRNs of the world having access to more money for technological conversion only when they are willing to match that money with their own.

Existing public media organizations also could use this one-time money to cover broadband streaming costs while they make the business model changes needed to cover those costs in the long term. In general, public broadcasters need to build the experiments of recent years into their regular operations. They need "digital lieutenants" that will argue the future at the highest levels of the organizations. Like Georgia Public Broadcasting, they need to be collecting much of their money directly through the web. They need to "mainstream" digital. But again, they should provide their own seed money, and a fund should match it.

In addition, we should expand the definition of an existing public media organization to include the nonprofit news organizations now thriving on the web, so long as they can demonstrate a commitment to news in the public interest. I define news in the public interest as the news people need to run their communities and their lives, and professional journalism as the fair, accurate, contextual search for truth. Many of the web-based news organizations are squarely in this camp. Established web-based public media outlets, such as the Center for Public Integrity, are beginning to show they can reach far larger audiences with a steady stream of new technology. But even though the digital revolution is what is making these kinds of organizations more viable, they don't have the kind of technology emphasis they need to have to be nimble to change to stay current. Again, if they are willing – as the Center for Public Integrity is – to invest their own money to become more digital, I think a match is in order.

The same is true for the new nonprofit investigative reporting centers and major nonprofit online news outlets emerging in recent years. At this point, there appears to be a major new outlet of some kind in virtually every state. If a new news organization proves itself editorially, and if it is raising significant funds for content from its local supporters, it might qualify for a technology grant that expands its capacity during the next five years. (Provided, of course, it is willing to invest some of its own money to improve its technological capacity). These "new traditionals"

are offering significant amounts of high quality news for the news stream, which is a goal of public broadcasting. Many daily newspapers now have no journalists in Washington and no one covering the statehouse. At relatively low cost, this kind of news can be provided by the "new traditionals," provided they have the technological capacity to keep up with changing software. Some of the most iterative web-based public media organizations now change their web sites fundamentally every few weeks. That kind of culture of constant innovation needs to be built into both existing and new public media.

This can be an open-ended annual fund or a time-limited initiative along the lines of the Public Television Digital Conversion project. Based on the reaction to our five-year Knight News Challenge, I would suggest at least a five-year effort. It took many decades to establish the status quo in public broadcasting. It will take years as well to transform it. Simply scaling up the projects that already are good – the common public media platform, Public Insight Journalism, Open Block and Document Cloud are just a few of those – would be a good start for the first few years of this fund.

I really can't emphasize the importance of this enough. Investing in newsroom technology is the "first best dollar" you can spend. Computers are not just the printing presses and the broadcast towers of the 21st century. The digital age is changing much more than just delivery. It is changing every part of the news system. Definitions of the reporter, the story, the medium and the audience all are in flux, and the old one-way flow of reporter, story, media, audience is in flux most of all. The computer chip is neuron of a new age in which anyone can report news, stories can involve massive amounts of data, be reported in all media at once and be shared, commented upon and acted upon instantly by a community. The nations that see this and adapt rapidly to this age will thrive for a century or more, just as the giants of the industrial age thrived. Those that do not, will not.

2. Merger and partnership technology growth fund

A significant amount of money, some \$55 million a year in this hypothetical budget, could be set aside to help existing public media improve through partnerships and mergers.

If a public radio station and a public television station want to create a joint web site (such as Ideastream, in Cleveland), they can grow their memberships and keep their technology costs under control at the same time, thus freeing up more money for local journalism. Some forward-thinking public broadcasters (Denver, Austin) are partnering with new web-based investigative projects. There are only a few, though. A partnership and merger fund could change that.

America's media policy has never been a single policy but, as fits our power-sharing philosophy, a profoundly diverse mishmash of different things being done by different agencies. This is reflected in the media ecosystems of communities. They have grown up across America as diverse as its plant life, each finding a place in the local media ecosystem as much because of the local microclimate as anything else. So some communities have strong daily newspapers, others don't. Some have a strong alternative or ethnic press. A few have strong public broadcasters (even so, in my estimation fewer than 20 percent of our public broadcasters have good newsrooms). In other communities, you might but lucky enough to have one of the good 211

systems. Or one of the few good community access cable channels. Or perhaps your community has one of the new web-based public media outlets. Or a strong library system that is teaching digital literacy. Or perhaps you have a strong tech community and thus many startups.

But if your community is normal, you'd be lucky to have even one of these things in a form that is significant, in comparison with what is being lost through the more than 13,000 newsroom jobs cut in the past few years at daily newspapers. When many traditional media outlets are getting weaker, the idea of mergers should be getting stronger. In the private sector, mergers just happen – the profit motive drives them. In the nonprofit sector, however, many would rather take their uniqueness into a battle to the death than set egos aside and further the cause by creating a single, stronger organization.

Again, I think this should be a fund with conditions. And the condition I would apply here is that this can't be a merger incentive fund. It needs to be a merger reward fund. In other words, the only people eligible would be those who already have merged. The merger should come first; application for money would come later. The purpose of the fund would be to help merged operations grow, not to get them to merge in the first place. A shotgun wedding only lasts as long as you can stand there holding the gun. A fund that tries to create mergers could end up creating monsters – organizations that contort themselves into something different just because they got the money. Tactics matter. If this fund isn't done right, it may well be better not to do it at all.

This is a "technology growth fund" because this focus is still providing money for the digital conversion of newsrooms, only this time to entities that are merging and partnering. Money in such budgets is fungible, and if technology money is available after the fact for the smartest mergers and partnerships, it frees up other money internally for those organizations to deal with unforeseen governance, personnel and structural issues brought about by a merger.

Also again, I would define "public media" quite generously. Even local governments interested in 2.0 kinds of community engagement applications might also qualify, so long as the technology they create would be open source, sharable and subject to community input.

Commercial-nonprofit hybrids could be allowed. There's nothing wrong with breaking down the barriers between newspapers and broadcast entities and nonprofits. Most American journalists strongly object to their own news organization receiving government funds, but when nonprofits provide a dependable firewall that protects editorial independence, many objections drop away. In all of this, independence is a critical journalism value. Firewalls must be built by all good news organizations so financiers of news -- be they individuals, companies, foundations or public funders – do not dictate news coverage. The news organizations must maintain these firewalls and describe them openly, and the funders must respect them. Without them, there is no credibility, and trust in the news evaporates.

Ethnic media should be included. Something like 25 percent of America consumes ethnic media, and technology needs there are huge. Already, ethnic media are forming hubs to translate their work into English and share it more broadly (New American Media), partnering with local foundations (San Diego), or collaborating with traditional media (New York, San Francisco).

A partnership fund also could provide field-building help by offering journalism associations, especially the new associations being formed by new news entities, funds for technology

projects. A whole suite of basic templates, content management systems and applications could be developed in partnership with such groups.

Even if all a merger fund did was help public radio and public television stations get money to grow after they had created dozens of Ideastreams, the nation would be better off. But a larger goal is even more helpful: A merger or partnership technology growth fund would encourage all media people to look more broadly and intelligently at their local media ecosystems. Those who are brave enough to try new kinds of partnerships would be eligible to try for growth money to help those experiments result in lasting, visible change.

3. News Technology Innovation Labs

This is a hypothetical \$25 million annual fund to transform the role of both the university and the nonprofit media innovation community through the creation of technology hubs that would act as universal help desks, retooling labs and distribution centers for a whole new generation of open source software.

Knight Foundation will experiment with such labs to prove their value. But what we will be able to do is small compared to the vision for a national network of such labs, which would result in groundbreaking partnerships between schools of engineering and schools of journalism and a new concept for the role of a major university in the media heath of its community.

We've learned from the Knight News Challenge that "interoperability" of software, even open-source software, is an issue. One of our experiments, might be adopted by only a handful of news organizations; another, by hundreds, and still another, by thousands of web sites. This difference can be a purely technical issue. Editors or news managers may want the new technology, but, depending on the software profile of their existing operations and the tech savvy of their people, they simply may not be able to adopt it.

Enter the News Technology Innovation Lab. You could look at them as technological versions of the local journalism centers already funded by the Corporation for Public Broadcasting. They could be based at major universities by competitive bid, or in a networked way within nonprofit media developers. They would put media innovation technology into media outlets in their surrounding communities, saturating the region's news organizations with new tools and the means to use them.

To get these funding, universities would need to show that they will use the money to forge a new relationship between computer science and engineering schools and journalism or communication schools. This will help both groups. Engineers will gain access to the community network already developed by most good journalism schools, which already are providing news and information in their immediate communities. They will see their work immediately deployed in real world situations, and get to – as journalists do – train themselves using live ammunition. Journalism schools will gain access to the people designing the technology that is shaping the future of the news industry, and this will help prepare future journalists for a high-tech world. They would be able to see how media innovation can go beyond informing and help engage communities in news.

Through the lab, the university would try to accelerate media innovation in all media in its immediate community. The lab would take the open source software that is emerging in the public media sector, rewrite it, adapt it, and help it get adopted locally. A program like Open Block, for instance, which scrapes the web for crime statistics, building permits, restaurant inspections and other public information, and organizes it by block, was written (and originally named Everyblock) as open source code in the software framework Django. A testing lab could rewrite it to work on other platforms, test the new versions, develop frequently asked questions, build a software developer community around the open source version of the application or introduce it into an existing community. If public radio or public television web sites in America all had their own versions of Open Block's open source code, a truly astonishing amount of information would be available to news consumers through public media web sites. Needless to say, data-mining software also makes things much easier for reporters to find important stories. In addition, when citizens can easily find public information on the web, they can understand what's there and what's not – and demand even more openness from their public institutions.

News innovation labs could be run at two dozen major cities in a variety of different geographic locations for roughly a million dollars a year per location. Hence a \$25 million annual fund. If you were sure to focus on at least some major university cities where the highest-speed internet exists, you will be developing at the "top end," and as faster broadband spreads, so will this new technology. The way product production cycles work, at least a four-year startup commitment would be needed. By then universities or nonprofits will know if licensing revenues would be significant future revenue sources and if the educational value is sufficient to build these labs into their existing operations. Licensing may well work out. Many new applications are needed, and some will do well as businesses.

Even if an application were developed in one community, since it is software, it could run anywhere. So a network of labs would do exponentially more than just a few of them. This concept basically takes key parts of the system that created the internet itself and applies the ideas to local media. If a renaissance in local news is to come in America, local media of all types must use digital age technology to its greatest advantage. It is the computer that is putting the "me" in media. Communities that can make the leap between traditional one-way media and the customization needed to engage people in today's two-way media system will prosper in the same way that communities prospered in the industrial age when they were along waterways or rail lines or highways.

Universities, which are in the knowledge creation and dissemination business, are uniquely situated to play a major role in whether or not their own communities are connected to this century's information superhighways. They could pay special attention to the stations they control through public broadcasting licenses – in general a vastly underdeveloped group – and some might propose to develop their own stations into models of what public media can and should be by connecting them directly with news innovation labs.

4. Media Innovation Projects: a "circle of champions"

Spreading the adoption of existing tools is not enough. In the digital age's culture of continuous innovation, a steady stream of even newer ones must be invented. Thus, an additional \$20 million per year can seed the most promising open source media innovation projects from any source.

Nonprofits advancing open source media innovation technology could qualify for funding to "scale" if they have won a previous open-competition, such as the Knight News Challenge or one of the two dozen other major technological competitions run by philanthropy. In other words, federal money could be available to scale the "circle of champions" – that whose fresh open-source software has received the best results from field-tests with media partners. This leaves a creative role for philanthropy in helping identify new ideas but puts national leadership behind the notion that the best of these breakthroughs in the open source software world should have the best chances of universal adoption.

Since this software can be used by business as well as public media, its development can also help accelerate digital transformation on the commercial side. An example of this could be Document Cloud, a new tool for investigative reporting being invented by a nonprofit in connection with employees from Pro Publica and the New York Times. If resources existed to widely train toward the adoption of this tool, journalists of all kinds – citizen journalists as well as professionals – will have easier ways to use original source documents in stories. In addition, when the news links to the underlying source documents, it has greater credibility, as users can trace citations back to their source. In five or ten years, this tool will be in popular use. With a federal program to accelerate its distribution, that could be cut to two or three years. In the digital age, first mover advantage matters.

Open source tools could be funded even if for-profit entities developed them. A number of notable Knight New Challenge entries are either open source tools created by for profit entities (Development Seed, Stamen), building on existing open source tools (PRX), or from-scratch open

source projects (Davis Wiki). They range over mapping, data visualization, and local wikis. Projects like Google's Summer of Code are models, where Google pays students a summer stipend to work on pre-approved open source projects.

5. Senior Fellowship Fund for Master Teachers

A senior technology fellowship fund could be a \$20 million "senior geek squad" of traveling fellows who retrain public media for the digital age. Google, for example, allows its engineers to devote 20 percent of its time to whatever kind of work they want, including volunteering work. A public private partnership, possibly also with philanthropists organizing the competitive aspect of the project, could choose fellows each year to travel to public media sites around the United States – these would be professional technologists who treat the media organizations as clients -- for digital transformation projects, including training, new interactive product adoption and the revamp of existing systems. They would be experts on tech-enabled journalism, data-driven reporting and visualization, multimedia, contextual delivery, content management systems, plug and play widgets and applications. Even at \$20 million, not even half of the existing public media outlets would be able to host such fellows. As with other funding in this letter, this money should not be an outright gift, but rather, a match to training the public media entity already is pledged to provide.

6. Scholarship Fund for Tomorrow's Media Technologists

A \$20 million annual scholarship fund could create a cadre of students co-major in both computer science and journalism. Northwestern and Columbia have started these kinds of

programs and many other universities are considering them. A pilot program at Northwestern has proven this concept. A major expansion would ensure we are graduating at least 200 of our best and brightest students each year who can help us reshape our public media landscape. In return for the free scholarship, the students would each spend a year as a circuit rider helping public media better transition to the digital age, working with the senior fellowship program above. After their year of service many will go on to join the private sector.

7. Beyond the Classroom: Digital Tools for Digital Literacy

Digital literacy is arguably the most important literacy of the new century. It encompasses all literacy that has come before the digital age – general, civic, media and news literacy – but also some new ideas. Today, one must know not just how to read and write, or how to think critically, but how to navigate and participate in cyberspace. Oddly, relatively few educators are actually using digital tools to advance the goal of digital literacy. This new tool, the computer is the tool that both creates and can answer the challenge. Digital teachers never sleep. They can be as fun as the most exciting game. They can be combined with classroom lessons or operate independently from the classroom. It is significant that a leading resource for high school journalism is highschooljournalism.org, and a leading resource for all journalism education is newsuniversity.org. But where is their equal when it comes to digital literacy, which the Knight Commission was convinced all people need? An annual \$10 million fund could award grants to leading journalism schools and professional organizations for digital platforms that offer digital media education to all: everything from digital literacy to training for citizen journalists to public media training. In some of Knight Foundation's pilot programs, educational digital games are among the most popular teaching tools. Schools that teach journalism or news literacy classes could apply for classroom grants for current technology. (One such school is the James L. Knight School of Communications at Queens University of Charlotte, which hopes to teach digital literacy to the entire community; another is Stony Brook in New York, which is currently teaching news literacy to 10,000 students.) Digital tools for digital literacy would resonate with everyone, from those wanting to be community contributors, or "citizen journalists," to those who just want to figure out how to apply for a job online.

Conclusion

A Public Media Technology Transformation Fund could create the public media of tomorrow. In both new and traditional public media, it can help develop the "culture of constant innovation" necessary to protect the public's previous investment and the best way to offer more choices to the American consumers.

A Technology Transformation Fund could do more than prevent the painful and unnecessary dismantling of the public's investment in quality broadcasting as consumers continue to seek out news that is portable, personal and participatory. A fund could help provide the tools for a community news renaissance in the United States and reposition the nation as a creative force internationally in building high-tech community news systems.

History shows us quite plainly that not all Americans wish to, are able to or can afford to consume news and information through the commercial system. Noncommercial alternatives

provide more choice. This is why billions are donated to public media every year by "viewers and listeners like you." Choice is what this country is all about.

As a public media consumer, here's my advice: Anyone wanting to increase money for public media, needs to increase the benefits of public media. Meaning this: we need public media that is more local, more interactive and more diverse.

In some parts of the nation, public broadcasting is a primary news source. It would be a poor use of government funds to do nothing more than supports status quo technology when we know the status quo is on the way out. When all Americans can listen to anything they want in their cars, for example, national programming will be directly available. There will be no reason to listen to a local public radio station if it is not indeed local. Only by embracing digital platforms and news collection tools now will public broadcasting as a whole find the local connections it will soon so desperately need.

The Corporation for Public Broadcasting's innovation effort is laudable but proportionately puny, by some estimates as low as 10 percent of its budget. And CPB money is only a fraction of the overall public media budget. So right now technology transformation money is a fraction of a fraction of what we are putting into public broadcasting. Even calling it public broadcasting no longer makes sense. Let's call it public media.

Public media innovation is doable. It's happening every day – just not fast enough. It's worth acknowledging that efforts like Public Radio Exchange, incubated at the Station Resource Group, have demonstrated that the government can invest in innovation for public media when it sets its mind to the task. It's also worth noting that while philanthropy, including Knight Foundation, has demonstrated how easily new tools can be developed, private grantmakers simply do not have the resources to "scale" these innovations. If we try, we will be hard pressed to continue to develop new ideas.

Let me end with two personal observations.

At the Newseum, we studied news and information going back to the earliest spoken word. I can think of no period of history, from the Roman roads of old to universal phone service funds of today, when successful leaders did not try in some systematic way to improve their news and information technology. In all the history we studied, never did we find an American leader of any party saying, "we would have succeeded if we just hadn't overspent on our information technology."

At Knight Foundation I have been impressed by the never-ending human creativity that drives ideas for new tools in this new age. One of our projects is with web pioneer Tim Berners Lee and the Media Standards Trust. By creating an open source micro-formatting system, that project is helping The Associated Press and hundreds of newspapers meta-tag news stories, so news organizations can, in essence, footnote the news – making it more valuable. Eventually, this may provide an entirely new way of searching for news. Instead of getting whatever stories a search algorithm provides, you might be able to find only the eyewitness accounts of an event, or accounts from award-winning journalists, or from the writer on the scene the longest, etc.

Finding ways to help public media grow to use these tools is essential if we are to have public media in the future. Old tools are just not much help these days. The old metaphor for journalism was to shine the light, and people would find their way. Just try using a flashlight at noon on Miami Beach. Not much help. What you need, in a world that is all lit up, a world in which things hide in plain sight, is not a flashlight but a good pair of sunglasses. They still help you see. They help you find your way. In the digital age, we do indeed need new ways of looking at things. We need both flashlights and sunglasses, and we need to know which to use when.

Thank you for the invitation to contribute,

Eric Newton, Vice President, Journalism Program

John S. and James L. Knight Foundation, Miami, Florida